CRATE *CA30/30D*
ACOUSTIC AMPLIFIER

OWNER'S GUIDE

Congratulations!

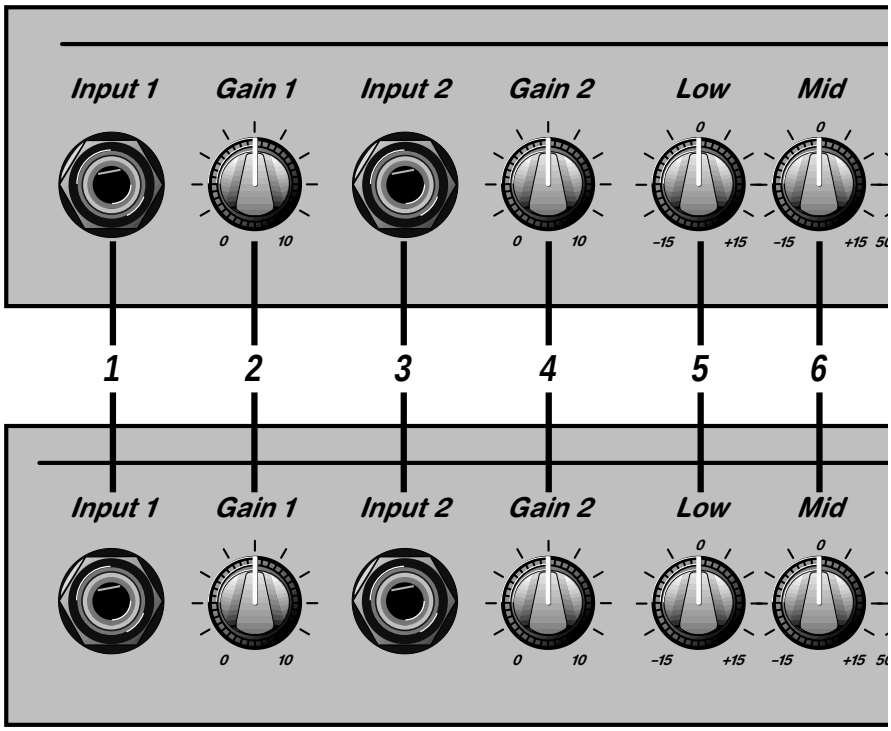
You are now the proud owner of one of Crate's latest contributions to the world of acoustic amplification, the CA30/30D. This compact amplifier delivers a strong 30 watts of clear musical power and incorporates two inputs (each with a gain control), three bands of equalization, *plus* Crate's Contour control for added tonal flexibility. The CA30 features a switchable chorus, while the CA30D features Crate's DSP digital reverb and effects. Both models also feature front panel Insert (effects loop) and Line Out jacks. An 8" Polypropylene cone coaxial speaker delivers smooth clear sound with excellent projection and fidelity.

Your CA30/30D is Musician Made in the U.S.A., using only the best components. Extensive testing at the hands (and ears) of skilled technicians and musicians insures you that this amplifier is the absolute best it can be.

In order to get the most out of your new amplifier, we strongly urge you to go over the information contained in this manual before you begin playing.

And ***thank you*** for choosing CRATE

The Front Panels:



1,3: Input 1, Input 2. The signal output from your acoustic instrument, tape player, rhythm machine. high-Z microphone or other source may be connected to either or both of these jacks by means of a shielded signal cable. Each of the input jacks is governed by its corresponding gain control (#2 for Input 1, #4 for Input 2). The signals from these two jacks are summed together after their gain stages.

2,4: Gain 1, Gain 2. Use these controls to set the input gain level for the corresponding input jack. These controls set the level of the input signal and serve as the amplifier's volume controls.

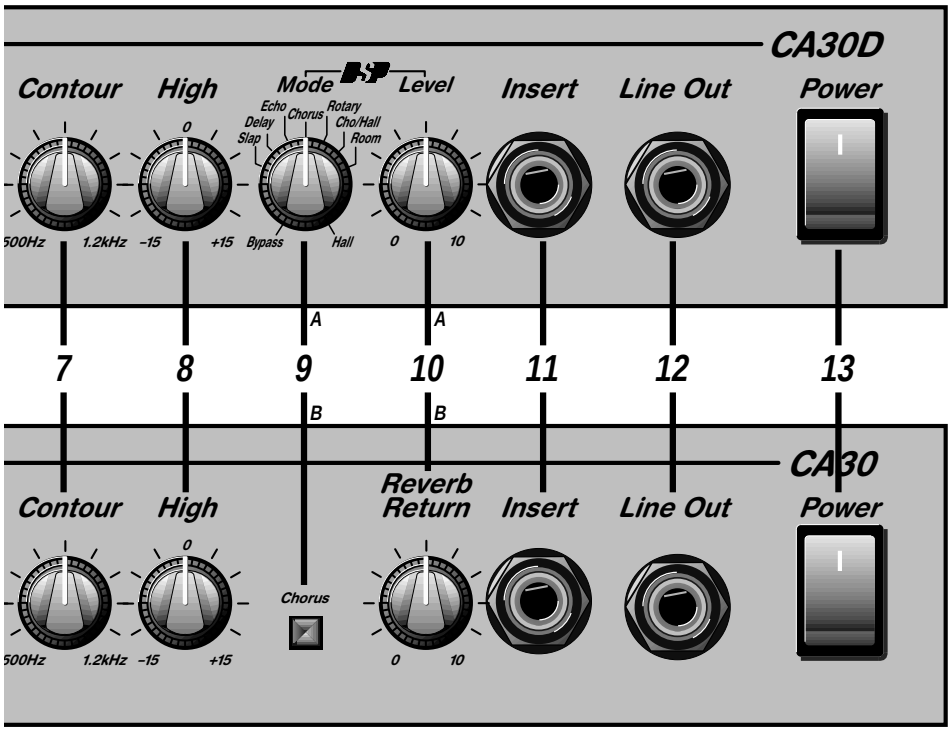
5: Low. This serves as the bass control for both channels. Adjust this control to get the best sounding bass response for your instrument. Excessive boost of the low control can cause an unnatural howling (acoustic feedback from your instrument) and should be avoided.

6: Mid. This serves as the midrange control for both channels. Adjust this control to get the best projection and midrange tones for your instrument. The center point of the mid control is chosen by the setting of the contour control (#7).

7: Contour. Use this control to set the center point of the mid control. This control should be set at the frequency which gives you the most natural midrange tones.

8: High. This serves as the treble control for both channels. Adjust this control so your high notes and harmonic overtones are lively but not overpowering.

9[A]: DSP Mode (CA30D only). Use this control to select the type of digital signal processing applied to the output signal. (See the section entitled "The DSP Control" for more information.)



9[B]: Chorus (CA30 only). This switch, when depressed, applies the internal chorus effect to the output signal. The rate and depth of the chorus have been optimized for use with acoustic instruments.

10[A]:DSP Level (CA30D only). Use this control to adjust the amount of digital signal processing applied to the output signal.

10[B]: Reverb Return (CA30 only). Use this control to adjust the amount of reverberation applied to the output signal.

11: Insert. Use this jack to add external effects to the signal. The ring = send (line out), tip = return (line in), sleeve = ground. This jack can also be used to "chain" multiple amplifiers together, since connecting to this jack does not interrupt the signal going to the amplifier. (See the illustrations on the panel to the right for more information.)

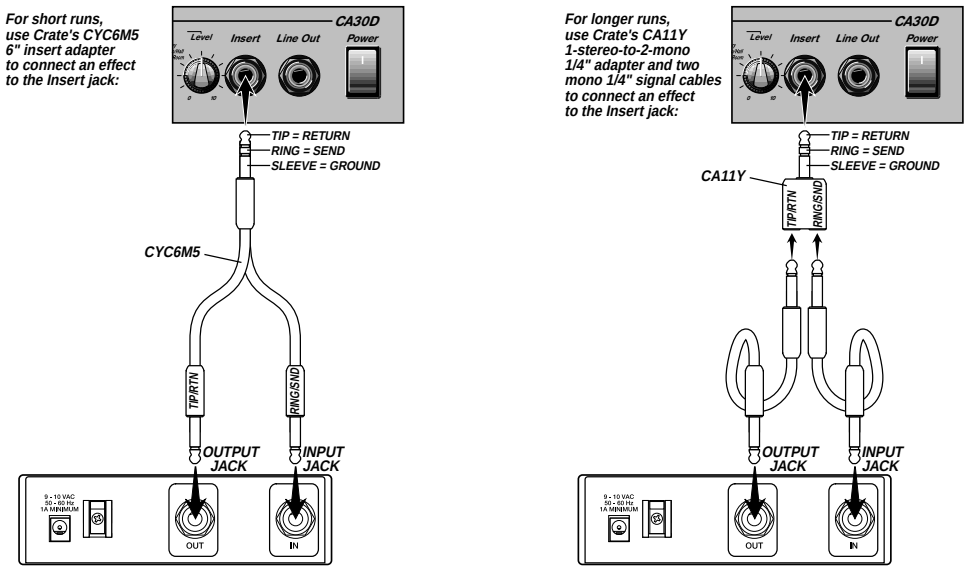
12: Line Out. Use this jack to connect a high impedance, unbalanced line level signal to a house sound board, a recording console or another amplifier.

13: Power. Use this switch to apply power to the amplifier: the amp is on when the top of the switch is depressed, off when the bottom of the switch is depressed. The switch illuminates when the amp is on.

14: AC Line Cord. ***(Rear panel, not shown)*** Connect the male end of this cord to a suitable source of AC line voltage. Refer to the voltage information on the back of the amplifier for its voltage and current requirements. **Note:** This is a grounded plug. **To avoid the possibility of electric shock, DO NOT defeat the ground connection in any way!**

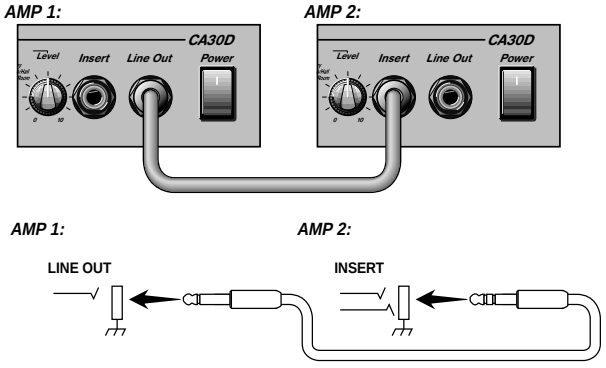
Connecting to the Insert jack:

The Insert jack (#11) lets you patch external effects into the amplifier just prior to its power amp stage. To connect the effect to the insert jack use Crate's CYC6MS stereo-to-mono Y-cord, or an adapter such as Crate's CA11Y and two shielded signal cables terminated with 1/4" tip/sleeve connectors as shown below.



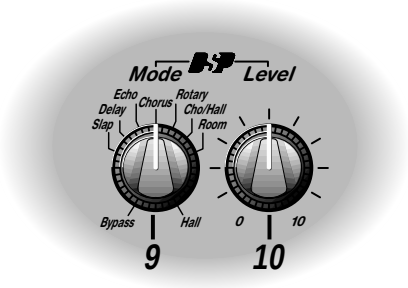
"Chaining" Amplifiers:

The Line Out jack of one CA30/30D can be connected to the Insert jack of another, to chain the amps together as shown below. (This frees up the Input jacks of the second amplifier.) Use a shielded signal cable terminated with 1/4" tip/sleeve connectors as shown below.



The DSP Control:

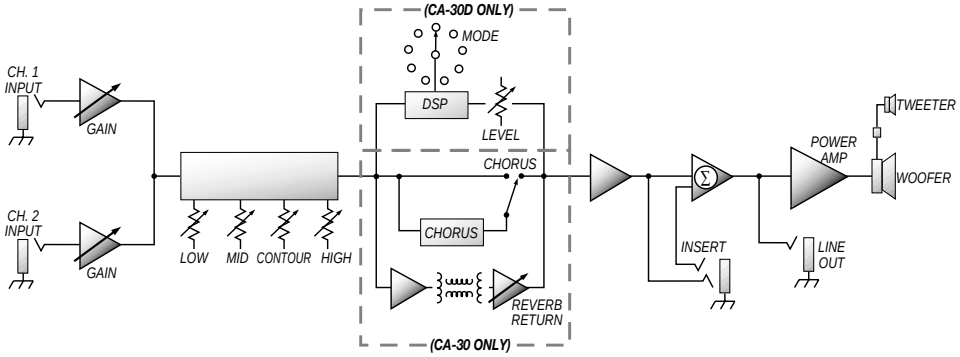
The CA30D features Crate's DSP digital signal processing. Use the DSP Mode control (#9, CA30D only) to select which type of effect will be applied to the amp's output signal. Use the DSP Level control (#10, CA30D only) to adjust the level of the effect.



The chart below lists the names of the effects as they appear on the amplifier and a description of their settings:

Name	Description	Name	Description
Bypass	Signal processing is turned off	**Rotary**	Simulated "Leslie speaker" tremolo
Slap	Short slapback w/out regen	**Cho/Hall**	Light chorus w/moderate reverberation
Delay	Medium slapback w/regen	**Room**	Moderate reverberation
Echo	Long delay w/regen	**Hall**	Heavy reverberation
Chorus	Light chorus, med-slow speed		

System Block Diagram:



CRATE CA30/30D Acoustic Amplifier

TECHNICAL SPECIFICATIONS

Output Power Rating:	30 watts RMS @ 1% distortion
Low:	+/-15dB @ 80Hz
Mid:	+/-15dB @ 400–1.2kHz
High:	+/-15dB @ 10kHz
Input Impedance:	1.5M ohm
Input Sensitivity:	20mV RMS
Sens. to Line out:	20mV
Max Input Signal:	10v RMS (28v peak to peak)
Insert Jack:	Line Out .7v RMS, Line In .7v RMS
Insert Jack Input Impedance:	44k ohm
Insert Jack Outptu Impedance:	2.2k ohm
Line Out Output Impedance:	2.2k ohm
Internal Speaker:	8" Poly cone coaxial with dome tweeter; 4 ohms; 50 watts; 1" voice coil
Power Requirements:	120VAC, 60Hz, 50VA 100/115VAC, 50/60Hz, 50VA 230VAC, 50/60Hz, 50VA
Size and Weight:	12-3/8"H x 13-1/2"W x 10-1/2"D, 28 lbs.

To keep the CA-30 looking its best, avoid abrasive cleansers. Wipe the cabinet clean with a slightly dampened cloth. Never use brass cleaners on the hardware since they could damage their protective coatings.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION
RISQUE D'ELECTROCUTION NE PAS OUVRIR

ATTENTION: POUR REDUIRE D'ELECTROCUTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPRABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN QUALIFIE.

VORSICHT
ELEKTRISCHE SCHLAGGEFAHR NICHT OFFENEN

VORSICHT: ZUR MINIMIERUNG ELEKTRISCHER SCHLAGGEFAHR NICHT DEN DECKEL ABENHMEN. INTERNE TEILE KONNEN NICHT VOM BENUTZER GEWARTET WERDEN. DIE WARTUNG IS QUALIFIZIERTEM WARTUNGSPERSONAL ZU UBERLASSEN.

THIS EQUIPMENT HAS BEEN DESIGNED AND ENGINEERED TO PROVIDE SAFE AND RELIABLE OPERATION. IN ORDER TO PROLONG THE LIFE OF THE UNIT AND PREVENT ACCIDENTAL DAMAGES OR INJURY, PLEASE FOLLOW THESE PRECAUTIONARY GUIDELINES:

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN CHASSIS; DO NOT DEFEAT OR REMOVE THE GROUND PIN OF THE POWER CORD; CONNECT ONLY TO A PROPERLY GROUNDED AC POWER OUTLET.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: OUR AMPLIFIERS ARE CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS. CONTINUED EXPOSURE TO HIGH SOUND PRESSURE LEVELS CAN CAUSE PERMANENT HEARING IMPAIRMENT OR LOSS. USER CAUTION IS ADVISED AND EAR PROTECTION IS RECOMMENDED IF UNIT IS OPERATED AT HIGH VOLUME.

EXPLANATION OF GRAPHICAL SYMBOLS:
EXPLICACION DE SIMBOLOS GRAFICOS:
EXPLICATION DES SYMBÔLES GRAPHIQUES:

= "DANGEROUS VOLTAGE" "VOLTAJE PELIGROSO" "DANGER HAUTE TENSION" "GEFAHLICHE SPANNUNG"

= "IT IS NECESSARY FOR THE USER TO REFER TO THE INSTRUCTION MANUAL" "ES NECESARIO QUE EL USUARIO SE REFIERA AL MANUAL DE INSTRUCCIONES." "REFERREZ-VOUS AU MANUAL D'UTILISATION" "UNBEDINGT IN DER BEDIENUNGSANLEITUNG NACHSCHLAGEN"

Crate continually develops new products, as well as improves existing ones. For this reason, the specifications and information in this manual are subject to change without notice.

recyclable

CRATE

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